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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SMITH, NICHOLAS A

ART UNIT PAPER NUMBER

1742

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,309

Applicant(s)

CHENG ET AL.

Examiner

Nicholas A. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-26 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13 and 21-23, drawn to an ozone generation system with a specified electrode member, classified in class 204, subclass 242.
 - II. Claims 14-15, drawn to a method of making an electrode member, classified in class 427, subclass 372.2.
 - III. Claims 16-20, drawn to method of ozone generation, classified in class 205, subclass 626.
 - IV. Claims 24-26, drawn to an ozone product, classified in class 423, subclass 579.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, an electrode member can be made by methods other than invention II, such as electroplating.
3. Inventions III and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus

as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case invention I can be used for waste-water treatment.

4. Inventions I and IV are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a materially different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case invention IV can be produced by a corona discharge system.

5. Inventions II and III are directed to related processes in making electrodes and use of electrodes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, invention II can be used in a waste-water treatment process. Invention II pertains to a method of making an electrode while invention III pertains to process of producing ozone using an electrode. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

6. Inventions II and IV are directed to an unrelated product and process. Product and process inventions are unrelated if it can be shown that the product cannot be used in, or made by, the process. See MPEP § 802.01 and § 806.06. In the instant case, invention II (process of making an electrode) does not produce ozone.

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7. Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case invention IV can be made by corona discharge.

8. During a telephone conversation with Hua Gao on 9/11/2006 a provisional election was made with traverse to prosecute the invention of I, claims 1-13 and 21-23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-20 and 24-26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Information Disclosure Statement

9. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 23 contains the trademark/trade name Nafion. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material

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or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a solid polymer electrolyte and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kotz et al. (US Patent 4,839,007).

14. In regards to claims 1-10, Kotz et al. discloses an electrode member comprising a substrate member and an antimony modified tin dioxide film coating member with a ratio of Sn and Sb in the claimed range while performing a proper conversion on Kotz et al.'s electrode material (Sn to Sb ratio of 6.1 in col. 3, lines 47-64). While Kotz et al. is silent about the property of coating member comprising specific particles, since Kotz et al.'s product and processing making (col. 3, lines 47-64) are substantially the same as the claimed invention, Kotz et al.'s product would inherently have the same particles

size. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See MPEP 2112.

15. Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kotz et al. as evidenced by Koizumi et al. (US 2004/0011665).

16. In regards to claims 21-23, Kotz et al. discloses the electrode member as stated above in paragraph 14. Kotz et al. discloses a system capable of ozone generation (claim 1) as evidenced by Koizumi et al. (Koizumi et al., paragraph [0005] and paragraph [0029]). In regards the claimed feature "for electrochemical generation of ozone," applicant is reminded that a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). See MPEP 2114.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 11-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kotz et al. in regards to claim 5 as stated above in paragraph 14, and in view of Alder (US Patent 3,960,678).

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19. In regards to claim 11-13, Kotz et al. does not disclose a coating member comprising Nickel.

20. Alder teaches the use of Ni and Sb in SnO₂ electrodes. It would have been obvious to one of ordinary skill in the art to modify Kotz et al.'s electrode with Alder's dopants in order to improve sinterability, compactness and conductivity (Alder, col. 3, lines 57-61). Alder teaches a range of Ni and Sb that overlap the claimed ranges of dopants and such overlap establishes a prima facie case of obviousness as Alder teaches such addition of dopants have same utility over the whole range (col. 3, lines 57-61). See MPEP 2144.05.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Henuset et al. (US 2003/0089622) discloses an electrode member comprising a substrate member and an antimony modified tin dioxide film coating member.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAS

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